

### IN THE ABSTRACT

A ventilation circuit of a turbomachine turbine rotor having a turbine disk and an upstream flange disposed upstream from a combustion chamber from which it is spaced apart by a cavity. A first cooling air circuit delivers air into the cavity via main injectors and holes in the flange. A second cooling air circuit delivers air through enclosures delimited by the combustion chamber inner casing and the rotor via a discharge labyrinth, an under-injector labyrinth, and at least one labyrinth downstream from the main injectors between an annular structure and the flange. Three single-wiper labyrinths delimiting two cavities upstream from the venting cavity of the turbine disk are provided downstream from the main injectors. One of the cavities is fed with air from the second circuit upstream from the under-injector labyrinth by bore holes in the annular structure sloping tangentially in the rotation direction of the rotor.